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Appendix A: Protocols

Adopted by the Meewasin Valley Authority on February 5, 2016
by Special Resolution as part of the Development Plan.

A. DEFINITIONS

***Act*, The** means: The Meewasin Valley Authority Act.

Biomass: means all of the living vegetation matter for a given area, including both above and below ground components.

Buffer Zone: means the land within Meewasin Valley outside the Conservation Zone as described in Schedule "B" of *The Meewasin Valley Authority Act (The Act)*.

Concept Plan: means the land development or redevelopment for a large piece of land of a neighbourhood or larger scale. It includes residential, commercial, institutional, and/or industrial uses and shows broad, conceptual design elements such as development areas for various land uses, primary transportation and utility routing and infrastructure.

Conservation: means the application of qualitative and quantitative knowledge to the protection and management of natural and cultural resources.

Conservation Zone: means the lands described in Schedule "A" of *The Act*.

Development Plan: means the plans respecting Meewasin Valley on file in the office of the Authority and designated by the Authority as the Development Plan (*The* , S.2[g.1]).

Ecological Services: means the fundamental biological systems and processes that human beings are dependent on for their sustenance, health, well-being and enjoyment of life. They are subdivided into five categories: provisioning (e.g. the production of food and water); regulating (e.g. the control of climate and disease); supporting (e.g. nutrient cycles and crop pollination); cultural (e.g. spiritual and recreational benefits); and preserving (e.g. guarding against uncertainty through the maintenance of diversity).

Height: means the vertical distance measured from grade level to the highest point on a structure, or on a building to the highest point of the roof surface, if a flat roof; to the deck line of a mansard roof; and to the mean height level between eaves and ridge for a gable, hip or gambrel roof. Minor structures such as skylights or an elevator penthouse may be permitted to exceed the height limit but only to such height as is necessary to accomplish the purpose they are to serve. In no case shall they exceed ten (10) percent of the gross area of the roof.

Heritage Resource: means

a) an area where there is detectable archaeological, paleontological and/or historical evidence;
b) a site where significant symbolic meaning has been ascribed to natural or cultural resources which has biological, ecological, geological or similar environmental or scientific significance; and/or

c) a building, a parcel of land together with any structures thereon, or an historical route of travel which is deemed to be representative of the social, cultural, economic, military or political history of Saskatoon, Saskatchewan or Canada.

Humane: means human-scale, safe, pleasant, and inviting that promotes a sense of community and oneness, not merely utilitarian.

Improvement: means a building, structure or service facility constructed, or landscape construction, within Meewasin Valley, or any alteration thereof or addition thereto but does not include the ordinary care, maintenance or repair of a building, structure or service facility or of landscape construction (*The Act*, S.2[1]).

Landscape Construction: means any clearing, breaking, grading, fertilizing or cultivation of any area or the construction of an outdoor ground surface for games or athletics or the establishment thereon of trees, shrubs, flowers, grass or other forms of vegetative growth or outdoor furniture, including seating of a type suitable for a garden or park but not for an audience or assembly of spectators, or any functional or aesthetic features contributing to the general landscape design of the area, and includes the provision of any machines, equipment and tools that, in the opinion of the Authority, are necessary (*The Act*, S.2[n]).

Meewasin Valley means:

a) the areas described in Schedule A and B of *The Act* subject to any alterations made to those schedules pursuant to section 13 of The Act;
b) the lands in and under the waters of the South Saskatchewan River bounded:

    (i) on the north by the projection eastward of the north boundary of Section 10, Township 40, in Range 3, West of the Third Meridian; and
    (ii) on the south by the projection eastward of the south boundary of that portion of Section 4 in Township 35, in Range 6, West of the Third Meridian, lying west of the river; and

c) the shores of the South Saskatchewan River adjacent to the lands described in sub-clause (b);

and for the purposes of section 12 of the Act includes the verge (*The Act*, S.2[w]).

Natural Area: means a site of geologic, biologic, ecologic, or similar environmental or scientific interest detectable in existing soil conditions, flora and fauna, hydrological function, and/or palaeontological evidence on a site. Natural areas are relatively undisturbed by human activity; however, where disturbed, conditions must be appropriate to restore the site to native species dominant through a reasonable resource management program. Natural areas include: flood-prone areas, coulees, wetlands, ravines, swales, creeks, slumps, riverbank, river terraces, islands, native grassland and naturally occurring shrub and tree stands.

Natural Resource: means land, geology, vegetation, wildlife and water which have ecological and social value and importance in the environmental life cycle of the Saskatoon region, and which contribute to the region's quality of life.

Non-motorized transportation: means human-powered modes of transportation including walking, cycling, blading, skateboarding, and wheel chair, as well as motorized wheelchairs and personal mobility scooters.

Northeast Quadrant: means the land within the Meewasin Valley bounded on the west by the South Saskatchewan River and in the south by College Drive, except between Cumberland Avenue and Circle Drive, where it is bounded on the south by 14th Street.

Public Land: means land within Meewasin Valley owned by or leased to the City of Saskatoon, Province of Saskatchewan, University of Saskatchewan or the Meewasin Valley Authority; and includes the verge (*The Act*, S.2(w)).

Qualified Person: means a person who holds a membership in a profession regulated by statute or, where a profession is not regulated by statute has competencies based on relevant education and experience.

River Channel: means the lands beneath and in the waters of the South Saskatchewan River and includes the riverbed to the shoreline.

River Valley System: means the riverbed, shoreline, bank, flood plain, wetlands, swales, ravines, coulees, creeks and those areas with a direct impact on or impacted by these features.

Riverbank: means the elevations of land rising above the shoreline.

Riverbank Zone: means land within 92 meters of the shoreline or any part of the slope leading down to the shoreline where the gradient is in excess of 20 percent, whichever extends the greatest distance measured horizontally from the shoreline except:

- In the South Downtown District, where the riverbank zone means land shown on Appendix A to the South Downtown District Development Policy.
- In the northeast quadrant, where the riverbank zone means land within 150 meters of the shoreline or any part of the slope leading down to the shoreline where the gradient is in excess of 20 percent, whichever extends the greatest distance measured horizontally from the shoreline.

Riverbed: means the land covered by water as to wrest it from vegetation or as to mark distinct character upon the vegetation and upon the soil itself where the vegetation extends into the water.

Service Facility: means anything by means of which water, light, power or gas is supplied, any sewer or sewage system or any other facility that, in the opinion of the Authority, is necessary for the purpose of Meewasin Valley, and includes a road, curb, bridge, sidewalk or parking lot, outdoor seating of a type suitable for an audience of assembly of spectators and a building that is:

a) a headquarters building for the Authority;
b) a public bathroom, toilet, shower, changing room, restroom, shelter, tool or equipment locker, pumphouse, or machine house;
c) in the opinion of the Authority, incidental to a park or used in connection with the operation of a park; or
d) used for any combination of the purposes mentioned in sub-clauses (a) to (c).

Service Maintenance: means the maintenance of any service facility and includes snow removal, garbage disposal and the provision of any machines, equipment and tools that, in the opinion of the Authority, are necessary (*The Act*, S.2[aa]).

Shoreline: means the line dividing the riverbank and the riverbed where vegetation ceases or where the character of the vegetation and soil changes.

South Downtown: means the lands bordered by 19th Street on the north, the South Saskatchewan River on the south, the Broadway Bridge on the east and Avenue C on the west.

Sustainability: means the creation and maintenance of conditions under which humans and the rest of the natural environment can exist in productive harmony, permitting the fulfillment of the social, economic and other requirements of present and future generations.

Utility: means anything by means of which water, light, power, telecommunication or gas is supplied or any sewer or sewage system.

B. MISSION AND PLANNING PRINCIPLES

1.0 MISSION STATEMENT

The Meewasin Valley Authority exists to ensure a healthy and vibrant river valley, with a balance between human use and conservation by:

- Providing leadership in the management of its resources;
- Promoting understanding, conservation and beneficial use of the Valley; and
- Undertaking programs and projects in river valley development and conservation,

for the benefit of present and future generations.

2.0 PLANNING PRINCIPLES

Meewasin has and will continue to apply the following five fundamental principles in planning the Valley:

- Valley's resources are accessible to everyone;
- Conserve natural and heritage resources;
- Recreation and development balanced with conservation;
- Diverse activities for a varied and changing demographic; and
- Public participation in decision making.

C. OBJECTIVES OF DEVELOPMENT REVIEW

The objectives of reviewing concept plans and improvements are:

- to ensure that an improvement or development proposed in a concept plan for public land is consistent or in accordance with Meewasin's Development Plan; and
- to ensure that a proposed improvement or development proposed in a concept plan takes account of the natural and heritage resources and other special characteristics of a site.

D. APPLICATION OF THE POLICY

The Development Review Policy is to be used to assess concept plans on public land and improvements proposed on land and in the river channel within the Meewasin Valley.

The review of a concept plan or improvement by the Meewasin Valley Authority is separate and apart from any other review or approval that may be required by other agencies or jurisdictions.

The Development Review Policy does not apply to land exempted by *The Act* or by Bylaw 03 - The Development Review Exemption Bylaw.

E. OBJECTIVES AND POLICIES - CONSERVATION ZONE

1.0 GENERAL

1.1. OBJECTIVE

To ensure a concept plan or proposed improvement is consistent or in accordance with the Authority's Development Plan, elaborations and amendments to the Development Plan, and bylaws in force at the time of receipt of the application.

POLICY STATEMENTS

1.1.1. A proposed concept plan or improvement shall be reviewed with respect to the plans, and all amendments and elaborations thereto on file at the Meewasin Valley Authority and designated by the Authority as the Development Plan.

1.1.2. When a Meewasin plan or plan amendment or elaboration sets a different requirement or criterion than another Meewasin plan or plan amendment or elaboration, then the latest requirement or criterion shall apply.

1.1.3. In the case of public lands, the proposed use of the land, in addition to the proposed improvement, shall be reviewed in terms of the Authority's Development Plan.

1.1.4. A proposed improvement shall be consistent with the Authority's bylaws and regulations in force at the time of receipt of the application.

1.1.5. A proposed improvement shall be consistent with Appendix A: Protocols. Additional protocols or standards may be imposed as conditions of approval for a specific proposed improvement or concept plan.

1.2. OBJECTIVE

To help ensure the that the development review process is cost neutral.

POLICY STATEMENTS

1.2.1. The Authority may set a fee framework to cover the cost of processing and reviewing an improvement or concept plan application.

1.2.2. The costs of any study, plan or other material and/or consulting services required by the Authority to properly review an application, as well as any additional public hearing costs due to the level of public interest in a particular improvement, shall be borne by the applicant.

2.0 NATURAL RESOURCES

2.1. OBJECTIVE

To conserve significant natural resources.

POLICY STATEMENTS

2.1.1. If there is reasonable belief that the development proposed in a concept plan or an improvement may affect the natural resources in Meewasin Valley, the Authority may require the applicant to submit an Environmental Evaluation Report prepared by a qualified environmental planner or environmental scientist.

An Environment Evaluation Report for the development proposed in a concept plan or for an improvement for shall describe:

a) the purpose and rationale;
b) the natural resource(s) affected and baseline information;
c) the beneficial and adverse effects during the construction and operational phases;
d) the options and alternatives identified;
e) the actions to be taken to prevent, change, mitigate or remedy the adverse effects on the natural resources; and
f) the monitoring, including any sampling and analysis, and reporting to be undertaken.

An Environmental Evaluation Report shall be commensurate in cost and scope with the size, scale and cost of the proposed concept plan or improvement, and risk to the natural resources.

2.1.2. When an Environmental Evaluation Report demonstrates that the development proposed in a concept plan or an improvement will adversely affect the quality of the natural resources in Meewasin Valley, and when no appropriate or acceptable mitigation or remedial actions are proposed or can be implemented, the Authority shall deny the improvement.

2.1.3. Existing, healthy native vegetation in ravines or other sites where surface drainage is concentrated, shall be retained wherever feasible.

2.1.4. Lost biomass shall be replaced with new, native-species plantings that, as they mature, will be of equal or greater qualitative and quantitative value to what has been lost. The planting shall be in the immediate area of the lost biomass wherever possible. If it cannot be replaced within the immediate area, Meewasin will work with the proponent to identify an alternate location.

2.1.5. Habitat fragmentation shall be minimized.

2.1.6. Only improvements which enhance the leisure and educational use of the Meewasin Valley and would not adversely affect the natural and heritage resources shall be allowed in the riverbank zone.

2.1.7. No improvements shall be allowed on river islands and sand bars other than improvements specifically permitted in the Development Plan.

3.0 SLOPE STABILITY AND DRAINAGE

3.1. OBJECTVE

To ensure proposed improvements shall not cause or contribute to instability of the slopes of the South Saskatchewan River Valley.

POLICY STATEMENTS

3.1.1. A Geotechnical Report prepared by an appropriately experienced professional engineer registered under *The Engineering and Geoscience Professions Act*, shall be submitted for improvements proposed on sites on the east side of the South Saskatchewan River within Meewasin Valley.

When there is reasonable belief that a proposed improvement may affect slope stability on or adjacent to a site anywhere within the Meewasin Valley, the Authority shall require the submission of a Geotechnical Report.

A Geotechnical Report shall:

a) define the subsurface soil strata, their properties and existing conditions;
b) assess the stability of the site on which the improvement is proposed;
c) assess the impact of the proposed improvement on adjacent sites;
d) identify the options and alternatives;
e) provide recommendations on design and construction related to slope stability; and
f) provide recommendations on required site instrumentation for monitoring slope stability during and after construction.

A Geotechnical Report shall be commensurate in cost and scope with the size, scale, cost and risk to the proposed improvement, and risk to adjacent properties.

3.1.2. The purpose of a Geotechnical Report shall be to demonstrate that:

a) the proposed improvement will not be affected by instability of the valley slopes during and after construction; and,
b) the proposed improvement will not cause or contribute to increased instability of the valley slopes during and after construction.

When a Geotechnical Report fails to demonstrate either (a) or (b) above, or both, and when no appropriate or acceptable remedial actions are proposed or can be implemented, the Authority shall deny the improvement.

3.1.3. When the safety risk to buildings or structures may be managed by taking measurements of slope movements, the Authority may require the installation of an appropriate number of slope monitors and recommend a monitoring program, prepared by a qualified person, before commencement of construction.

3.1.4. In the event of unexpected slope movement on or in the vicinity of the site on which the improvement is being constructed, the Authority may require work to be halted until such time as the Authority is assured that continued construction will not affect slope stability and the safety of buildings and structures in the vicinity of the site.

3.1.5. Methods for erosion and sedimentation control during the construction phase shall be identified.

3.2. OBJECTIVE

A proposed improvement shall not result in unnecessary or adverse alteration of surface or subsurface drainage.

POLICY STATEMENTS

3.2.1. A grading plan, prepared by a qualified professional, showing existing and proposed drainage patterns shall be submitted.

3.2.2. The selection of gradients for surface drainage of the site shall not create adverse impacts including ponding, erosion or flooding on or adjacent to the site.

3.2.3. Where surface drainage is not possible by grading alone, a supplementary drainage system or onsite stormwater management system may be required.

3.2.4. Drainage across a driveway or parking area shall be integrated into the design of the driveway or parking area.

3.2.5. On steep slopes, vegetation, rip-rap, retaining walls or pegged and wired sod may be required to improve slope stability. Methods selected to improve slope stability shall conform to the *Meewasin Riverbank Restoration Manual*.

3.2.6. On steep slopes, surface water shall be diverted back from the slope, unless the drainage area is small and will not lead to erosion.

3.2.7. During construction, provision shall be made to provide temporary erosion control such as barriers or a drainage structure if there is a possibility of erosion.

4.0 LANDSCAPE CONSTRUCTION AND MAINTENANCE

4.1. OBJECTIVE

Landscape construction shall be used where appropriate to soften the visual impact of buildings or structures, screen facilities such as parking lots or outdoor storage areas, buffer or separate different uses, provide functional and aesthetically pleasing open spaces, provide ecological services and integrate the landscape along the river valley system into the adjacent neighbourhoods.

POLICY STATEMENTS

4.1.1. When there is reasonable belief that the construction of a proposed improvement may result in the removal or destruction of significant vegetation, including native vegetation, or the improvement may be enhanced by landscaping, the Authority may require the submission of a landscape plan prepared by a landscape architect registered with the Saskatchewan Association of Landscape Architects or other qualified professional. If the proponent can demonstrate, to the satisfaction of the Authority, that the nature of the proposed landscaping does not require design by a registered landscape architect or other qualified professional, the Authority may waive this requirement.

Where appropriate, the landscape plan shall identify the extent of the construction impact zone, location, species, quantity and size of vegetation to be removed, retained and planted.

The landscape plan shall be commensurate in cost and scope with the size, scale, type, cost and location of the proposed improvement.

4.1.2. Trees and shrubs to be retained shall be marked and suitably protected during construction.

Protective measures may include one or more of the following, as appropriate:

a) installation of protective solid wooden fencing, covered with snowfence, at least 1.2 meters high, to the full extent of the drip zone;
b) installation of protection around tree trunks to a minimum 1500 mm height above grade;
c) avoidance of excavation and other site work within the root zone of trees and shrubs;
d) no storage of materials, equipment or vehicles within the drip zone or against tree trunks or branches;
e) no fueling of vehicles and equipment or storage of fuel within the drip zone.

4.1.3. To enhance the existing landscape, additional vegetation shall complement native and existing species, and be compatible with ecological conditions. In special circumstances such as an arboretum, plant nursery, or experimental research, other types of vegetation may be planted.

4.1.4. Areas which, during construction, have been cleared of vegetation, or where vegetation has been damaged or destroyed, shall be re-landscaped in accordance with the landscape plan required in 4.1.1.

4.1.5. Landscape construction on public land shall be properly maintained to ensure the growth and development of plant material chosen for the site.

4.1.6. Landscape plans and development shall consider four-season functionality and aesthetics.

4.1.7. Any lost biomass shall be replaced with new plantings that, as they mature, will be of equal or greater qualitative and quantitative value to what has been lost. The planting shall be in the immediate area of the lost biomass wherever possible. If it cannot be replaced within the immediate area, Meewasin will work with the proponent to identify an alternate location.

5.0 RIVER CHANNEL

5.1. OBJECTIVE

A proposed improvement shall not cause or contribute to an adverse alteration of the shape of the river channel (channel morphology) or water flow dynamics (river dynamics).

POLICY STATEMENTS

5.1.1. When there is reasonable belief that a proposed improvement may alter channel morphology or river dynamics, the Authority shall require the submission of a Hydrotechnical Report prepared by an appropriately experienced professional engineer registered under *The Engineering and Geoscience Professions Act*.

The report shall describe:

a) the purpose and rationale for the proposed improvement;
b) the part of the river and river channel affected by the proposed improvement;
c) the beneficial and adverse effects of the proposed improvement on the part of the river and river channel affected by the improvement, both during and after construction; and
d) the actions to be taken to prevent, change, mitigate or remedy the adverse effects of the proposed improvement on the part of the river and river channel affected by the improvement.

The report shall be commensurate in cost and scope with the impact, risk, size, scale, and cost to the proposed improvement, channel morphology or river dynamics.

5.1.2. When a report demonstrates that a proposed improvement will adversely alter channel morphology or river dynamics, and when no appropriate or acceptable remedial actions are proposed or can be implemented, the Authority shall deny the improvement.

6.0 PUBLIC ACCESS

6.1. OBJECTIVE

To provide humane, convenient, continuous and safe pedestrian and other non-motorized transportation circulation system for the public along the riverbank and on to and across bridges and other transportation crossing features, which creates an inviting and desirable setting that encourages enjoyment of the river valley.

POLICY STATEMENTS

6.1.1. Only improvements which would protect the natural and heritage resources or enhance the leisure and educational use of the Meewasin Valley shall be allowed in the riverbank zone.

6.1.2. When the conservation of natural and cultural heritage resources would benefit from limited public access, or when public safety may be endangered, public access along or to the riverbank shall be appropriately controlled.

6.1.3. An improvement consisting of a storm sewer outfall shall incorporate design features such as guard rails and safety grates to ensure public safety around the outfall structure. Design of the storm sewer outfalls shall conform to guidelines contained in the *Storm Sewer Outfall Study* of the Meewasin Valley Authority.

6.1.4. An improvement which will adversely affect the provision of a continuous and safe pedestrian circulation system along the riverbank shall be designed to include pedestrian walkways, overpasses, underpasses, or other safety features as appropriate. Transportation crossing features, including bridges, shall incorporate a bi-directional, multi-use trail and connectivity with the Meewasin Trail system.

6.1.5. Transportation crossing features, including bridges, shall be designed for four-season, pedestrian and other non-motorized transportation users and the design shall demonstrate consideration for lighting, snow removal and splash protection.

6.1.6. Routing, grades, and primary trail surface finishes shall be designed for universal accessibility. Grades shall not exceed 5% on a primary trail unless it can be demonstrated that this is not technically feasible, in which case there shall be an alternative route with grades of 5% or less or a safe, accessible alternative. Roadways and trails shall incorporate barrier-free access through methods such as curb cuts and ramps.

6.2. OBJECTIVE

To provide safe and convenient public access to the riverbank zone.

POLICY STATEMENTS

6.2.1. On sites where the construction of an improvement may limit public access to the riverbank zone and where public access is desirable, the site development shall include adequate open space dedicated for the purpose of ensuring public access to the riverbank zone.

6.2.2. Concept plans for public land within or adjacent to the riverbank zone shall clearly demonstrate how the public access to the riverbank zone will be achieved.

6.2.3. If, during the construction phase of an improvement, the construction impedes use of the Meewasin Trail, provision shall be made for safe, humane detour(s).

6.3. OBJECTIVE

To provide opportunities for visual access to the river valley system.

POLICY STATEMENTS

6.3.1. Public access to river view points and vistas shall be a consideration for siting and massing of improvements and the developments proposed in concept plans.

7.0 PLANNING AND DESIGN

7.1. OBJECTIVE

Buildings or structures proposed within the Meewasin Valley shall be designed to complement the river valley setting.

POLICY STATEMENTS

7.1.1. A building or structure proposed in the riverbank zone or in a public park, open space, or designated conservation area, shall not exceed 11 meters in height. The design shall include suitable transitions, terraces, landscaping and the appropriate design features which soften the impact of the building or structure as it relates to its setting in the riverbank zone, public park, open space or designated conservation area.

7.1.2. Subject to 7.1.1, the height of a building or structure fronting on Saskatchewan Crescent between the Traffic Bridge/Victoria Avenue and Senator Sid Buckwold Bridge/Idylwyld Freeway, shall not exceed the elevation of the sidewalk on the north side of 11th Street. The sidewalk elevation shall be determined by projecting southward the east and west property lines of the Saskatchewan Crescent building site, measuring the sidewalk elevations at these two points, and averaging the elevations.

7.1.3. On the east side of the South Saskatchewan River, within the City of Saskatoon, a building or structure shall be designed to include suitable transitions, terraces, landscaping and other appropriate design features which soften the impact of the building or structure as it relates to the adjacent riverbank zone, public park, open space, designated conservation area, or surrounding area. Buildings and structures located north of University Bridge/College Drive and within 200 meters of the shoreline shall not exceed 23 meters in height.

7.1.4. Subject to policy 7.1.1 on the west side of the South Saskatchewan River, within the City of Saskatoon, a building or structure proposed on a site adjacent to the riverbank zone, public park, open space or designated conservation area, shall be designed to include suitable transitions, terraces, landscaping and other appropriate design features which soften the impact of the building or structure as it relates to the adjacent riverbank zone, public park, open space or designated conservation area.

7.1.5. The height of a proposed utility structure such as a telecommunications tower, telecommunications line, wind turbine, solar collector or transmission line shall not be limited but shall be appropriate to the function served.

7.1.6. Additions to existing buildings or structures shall be designed to complement the existing building or structure.

7.1.7. Storage, waste bins and/or other service areas shall be effectively integrated, respecting the improvement and adjacent land.

7.1.8. Slope stability shall be addressed as per section 3.0.

7.2. OBJECTIVE

To ensure a suitable transition or interface with natural areas

POLICY STATEMENTS

7.2.1. If a roadway is adjacent to a natural area, the roadway design shall provide an effective interface to:

a) eliminate or mitigate the negative effects of excessive light and sound on adjacent land;
b) address wildlife movement;
c) facilitate safe and enjoyable pedestrian and other non-motorized transportation circulation; and
d) accommodate vegetative plantings appropriate for the general characteristics of the area.

7.2.2. Improvements within and adjacent to the river valley and other natural features shall provide an aesthetically-pleasing, humane interface experience.

7.2.3. Improvements in the form of residential, commercial, institutional or industrial development that are adjacent to either the river bank, or public land adjacent to the riverbank, shall only front onto the riverbank, public land and/or any public roadway intended to provide a primary access along the river valley.

7.2.4. Improvements in the form of residential development are not restricted with regard to the orientation of frontage adjacent to non-river valley natural areas.

7.2.5. Improvements in the form of non-residential development shall only front natural areas in order to prevent the rear or side of any parcel being adjacent to natural areas. Any storage compounds, parking areas, waste containers and other unsightly components shall be fully screened with either solid fencing or plantings.

7.2.6. Not withstanding sections 7.2.3, 7.2.4, and 7.2.5, public use facilities with publicly accessible grounds may back onto the river valley provided they effectively and aesthetically interface with the river valley. Buildings shall be massed in such as way as to respect river views and vistas.

7.3. OBJECTIVE

To integrate neighbourhood or larger scale tracts of land within the Meewasin Valley, intended for development or redevelopment, in such a way as to optimize pedestrian and other non-motorized modes of transportation circulation and connectivity and minimize negative environmental impacts.

POLICY STATEMENTS

7.3.1. Development proposed in concept plans shall be in compliance with the Development Plan.

7.3.2. When reviewing concept plans, the Authority shall consider only those aspects that will impact the conservation zone such as transportation circulation and access, impact on natural areas, infrastructure crossings, roadway interface, drainage and slope stability.

7.3.3. The Authority may identify further development review requirements for some or all individual improvements if it has approved a concept plan and the improvements have been identified within the approved concept plan. Any requirements for further review shall be incorporated into the conditions of approval.

7.4. OBJECTIVE

To encourage a high standard of design for Improvements and land development within the Valley that is attractive, stimulating, functional, safe and in harmony with local natural and cultural heritage, which enhances the Meewasin Valley and adjacent areas.

POLICY STATEMENTS

7.4.1. Improvements shall achieve a high standard of design based on the compatibility of new development with the existing urban pattern, while accommodating a gradual evolution of architectural styles and innovative building forms, providing a built environment aimed at long term public benefit.

7.4.2. Improvements and developments proposed in concept plans shall demonstrate consideration for all four seasons in orientation, design and landscaping.

7.4.3. Prominent viewscapes and vistas, especially river views, shall be taken into consideration in site design, structure orientation and structure massing.

7.4.4. Elements such as waste bins and storage compounds shall be screened with attractive fencing and/or plantings.

7.4.5. Within the City of Saskatoon corporate limits, off-street parking areas shall only be permitted where required by municipal bylaws or where no on-street parking exists, and shall be enhanced with plantings, where this will not compromise safety. Where possible parking areas should incorporate on-site stormwater management through measures such as permeable surfacing and bioswales.

7.4.6. Exterior building finishes shall be of high quality and aesthetically pleasing.

8.0 TRANSPORTATION

8.1. OBJECTIVE

A proposed improvement shall not adversely alter vehicular traffic, public transit, pedestrian or other non-motorized transportation circulation in the vicinity of the improvement or add substantially to the volume of local vehicular traffic to the detriment of the surrounding area and the safety of people.

POLICY STATEMENTS

8.1.1. When there is reasonable belief that a proposed improvement will adversely alter traffic circulation or add to the volume of traffic in the vicinity of the improvement, the Authority may require the applicant to submit a Traffic Impact Study prepared by a qualified professional engineer registered under *The Engineering and Geoscience Professions Act* or qualified transportation planner.

The Traffic Impact Study shall describe:

a) the purpose and rationale for the proposed improvement;
b) existing pedestrian and other non-motorized transportation, public transit, and vehicular traffic circulation and volume in the vicinity of the improvement, both total and peak hour;
c) the beneficial and adverse effects of the proposed improvement, including provisions for access, on vehicular traffic, public transit, and pedestrian and other non-motorized transportation in the vicinity of the improvement; and
d) the actions to be taken to prevent, change, mitigate or remedy the adverse effects of the proposed improvement on vehicular traffic, public transit and pedestrian and other non-motorized transportation modes.

A Traffic Impact Study shall be commensurate in cost and scope with the size, scale, cost, type and location of the proposed improvement.

8.1.2. When a Traffic Impact Study demonstrates that a proposed improvement will adversely affect vehicular traffic, public transit, or pedestrian and other non-motorized transportation circulation or volume, or the safety of people, and when no appropriate or acceptable remedial actions are proposed or can be implemented, the Authority shall deny the improvement.

8.2. OBJECTIVE

The on-site pedestrian and vehicular, public transit and non-motorized transportation circulation systems of a public park or similar public facility, and the access to the facility, shall be efficient, safe and complement the natural and heritage resources.

POLICY STATEMENTS

8.2.1. Vehicular access to a public park or similar facility shall be located to serve as many site uses as possible.

8.2.2. Vehicular access roadways shall not impede the safe and convenient access and crossing for pedestrian and other non-motorized transportation modes and shall be designed to conserve significant natural and heritage resources.

8.2.3. Pedestrian and other non-motorized transportation and vehicular traffic routes shall be separated wherever practical.

8.2.4. The number and width of vehicular right-of-ways shall be minimized to preserve public open space and natural areas while ensuring public safety.

8.3. OBJECTIVE

To provide a safe, humane, pleasant and inviting experience to pedestrians and other non-motorized transportation users.

POLICY STATEMENTS

8.3.1. Improvements and developments shown on concept plans shall not negatively impact pedestrian or other non-motorized transportation movement.

8.3.2. If the Meewasin Trail intersects with a roadway, the roadway design shall allow pedestrians and other non-motorized transportation users on the Trail to have the right of way. This should be indicated through signage or other appropriate forms of communication.

8.3.3. On any private or public roadway in a public park, plaza, or other public space, pedestrians and other non-motorized transportation users shall have the right of way, which should be indicated through signage or other appropriate forms of communication.

9.0 SERVICE FACILITIES AND SERVICE MAINTENANCE

9.1. OBJECTIVE

Service facilities shall be constructed and maintained to complement, or not detract from, the Meewasin Valley.

POLICY STATEMENTS

9.1.1. Other policies and guidelines contained in the Development Review Policy shall apply to service facilities.

9.1.2. Wherever possible and feasible, a service facility consisting of a utility shall not be located on the riverbank. When it is necessary to construct a utility on the riverbank, wherever possible and feasible it shall be constructed underground and any surface mounted components shall be appropriately concealed.

9.1.3. The construction area, laydown area, and associated temporary access road(s) for a service facility under construction shall be kept to a minimum. Appropriate environmental protection measures, including but not necessarily limited, those listed in Appendix A: Protocols, shall be implemented to reduce the impact of construction on the site and surrounding area.

9.1.4. Upon completion of construction of a service facility, any temporary access road(s) or construction barriers shall be removed and the site of work restored.

9.1.5. If a service facility consisting of a building is proposed in a public park, open space or designated conservation area, the design and exterior finish of the building shall conform to the standard design theme of the site on which it is located, and be durable and easily and economically maintained.

9.2. OBJECTIVE

To construct and maintain service facilities to ensure public convenience, use and safety in the Meewasin Valley.

POLICY STATEMENTS

9.2.1. Service facilities, other than utilities, shall be universally accessible, wherever feasible. All public washroom facilities shall be universally accessible.

9.2.2. Adequate exterior lighting shall be provided at the entrance to a public service facility building, along the access route and walkway and in adjacent parking areas. Lighting shall take into consideration avoidance of light pollution and impact on wildlife.

9.2.3. The design of a public service facility building shall be relatively vandal-proof. Doorways shall be visible and well-lit and glass surfaces should be protected through appropriate means when the building is not in use.

9.2.4. A public service facility building shall be properly maintained to sustain the building's appearance, durability and mechanical systems, and ensure public access and safety.

9.2.5. If, during the construction phase of an improvement, the construction impedes use of the Meewasin Trail, provision shall be made for safe, humane detour(s) of the Trail.

10.0 HERITAGE RESOURCES

10.1. OBJECTIVE

Significant cultural heritage resources in the Meewasin Valley shall be identified and, wherever possible, conserved and interpreted.

POLICY STATEMENTS

10.1.1. When there is reasonable belief that a heritage resource may be found on a site on which an improvement is proposed, the Authority shall require the applicant to submit a Heritage Resources Report prepared by a professionally qualified heritage specialist such as a heritage planner, archaeologist, palaeontologist, environmental scientist, historian or architectural historian.

The Heritage Resources Report shall:

a) describe the purpose and rationale for the proposed improvement;
b) investigate and inventory existing heritage resources;
c) include a 'site biography' for background information and to provide a context;
d) assess the impact of the proposed improvement on the heritage resources and on the heritage attributes of the site and the surrounding area;
e) identify the beneficial and adverse effects of the proposed concept plan or improvement on the heritage resources, during and after construction;
f) identify options and alternatives;
g) identify the options to prevent, change, mitigate or remedy the adverse effects of the proposed improvement;
h) recommend how best to conserve and manage the heritage resources such as retention on-site, removal or other approaches; and
i) identify the monitoring, including any sampling and analysis, and reporting to be undertaken.

The Heritage Resources Report should be commensurate in cost and scope with the importance of and risk to the heritage resources. Heritage resources research must comply with *The Heritage Property Act, R.S.S., 1980*, and all regulations relating thereto.

10.1.2. When it is evident that a proposed improvement will adversely affect the heritage resource on a site, the Authority shall require a recording or an excavation of the heritage resource, where feasible, the salvage of the heritage resource in danger, or the protection of the heritage resource with suitable barriers and signs.

11.0 SUSTAINABILITY

11.1. OBJECTIVE

To encourage, promote and support sustainable development within the Meewasin Valley.

POLICY STATEMENTS

11.1.1. Proposed improvements and concept plans are encouraged to demonstrate sustainable actions, attributes and features during the construction and operational phases such as:

a) Greenhouse gas emission minimization and management;
b) Energy efficiency;
c) Water conservation;
d) Waste minimization;
e) Use of renewable and/or reused materials;
f) Accommodation of pedestrian and other non-motorized transportation and public transit;
g) Erosion control measures;
h) Stormwater management measures that minimize or mitigate runoff;
i) Compact built form; and
j) Conservation and/or enhancement of public open spaces and environmentally sensitive land; and
k) Low impact development principles.

11.1.2. If the proposed improvement is intended to achieve a Leadership in Energy and Environmental Design (LEED) designation or any other sustainability designation, proponents shall be encouraged to identify this.

F. OBJECTIVES AND POLICIES - BUFFER ZONE

1.0 GENERAL

1.1. OBJECTIVE

To ensure the Authority is aware of, and consulted on proposed improvements in the Buffer Zone.

POLICY STATEMENTS

1.1.1. A proposed improvement shall be consistent with the Authority's Development Plan, bylaws, and policies.

1.1.2. The Authority shall be notified at least 45 days prior to the commencement of an improvement, unless exempt by *The Act* or bylaw.

1.1.3. Upon receipt of a notification of a decision to commence construction pursuant to *The Act*, S.18, the Authority shall review the proposed improvement and may express any concerns in respect to the proposed improvement to the applicant and, if appropriate, to a government or agency with jurisdiction to approve the proposed development.

Appendix A: Protocols

General Principles

- Build in the least sensitive areas.
- Consider wildlife impacts, including crossings and nesting times.
- Manage and minimize erosion, siltation and runoff.
- Use appropriate vegetation for reseeding and erosion control.
- Incorporate stormwater management controls: e.g., retention ponds and infiltration basins prior to release into natural streams, wetlands or lakes.
- Maintain litter free sites.
- Minimize off-site impacts, including noise, lighting, dust, off-site tracking of earth.
- Address contaminant and spills immediately and protect people, the air, soil and water from contaminant exposure.

Construction Protocols

<u>Independent Monitor</u>

- Based on the location and/or nature of the improvement and/or associated laydown areas, the Authority may require the proponent to contract an independent environmental monitor to provide direction on location of storage and laydown areas, topsoil stockpiles, activities near watercourses and wetlands, sampling, testing and site reclamation activities and to ensure that the actions undertaken are consistent with the approved Environmental Evaluation Report and/or the Heritage Resources Report. The monitoring program must be approved by the Authority prior to the commencement of any site work.
- The monitoring program and a sample of the the proposed Environmental Monitoring inspection report shall be included as part of the application for approval of an improvement
- Types of improvements that require an independent monitor include, but are not limited to those that:
    - are located in the river channel or on the shoreline;
    - involve excavation, stripping, or vegetation removal on or within 30 meters of the riverbank or a natural area;
    - are located within 30 meters of a known or probable paleontological, archaeological, or cultural heritage site;
    - are located on a site with known or probable rare and endangered species; or
    - are located on a site with known or probable contamination.
- The monitor shall be on-site for a project kick-off, and for certain environmentally sensitive activities (e.g., work near wetlands or watercourse crossings). Regular inspections shall be required for the remainder of the activities. The frequency and scope of the monitoring shall be commensurate with the potential environmental and cultural heritage impact of the proposed improvement.
- The monitor's inspection reports, including deficiencies, shall be provided to Meewasin, in written format, on a timely basis.

Ecological Considerations

- No clearing activities shall occur between May 1 and July 31, to avoid disturbance of nesting birds. If nesting birds are on-site after July 31, all activity shall cease immediately until the environmental monitor determines the appropriate actions to take.
- No in-river or shoreline activity shall occur during in fish spawning areas during spawning season.
- Silt fences and/or similar erosion control measures shall be implemented to ensure overland flow is not allowed to deposit sediment into a watercourse or wetland.

Stockpiling

- Topsoil shall be stripped and stockpiled for later use in site reclamation.
- Stockpiled topsoil shall be covered with tarps to reduce the potential for weed growth and erosion. The Authority may waive this requirement based on specific circumstances, such as winter construction or a short timeframe.
- Stockpiling of material is not permitted on undisturbed natural areas.

Equipment and Laydown

- Equipment and laydown areas are not permitted on undisturbed natural areas.
- Construction activities shall be confined to the designated equipment storage and laydown areas. Previously disturbed areas can be used for equipment storage and laydown, with the agreement of the environmental monitor.
- No equipment storage or laydown area shall be allowed within 50 meters of a wetland or watercourse.
- No equipment shall be serviced or fueled within 50 meters of a wetland or watercourse or in natural areas.
- Equipment removing material shall avoid entering wetlands (with exception of a backhoe bucket).
- Equipment shall be cleaned prior to entry into construction sites to avoid the spread of noxious weeds and/or invasive species.

Site Management

- All construction debris shall be removed from the site as quickly as feasible and be disposed of at an approved location.
- All excavated material shall be removed as quickly as feasible.
- During construction and operational phases, the site shall be managed to avoid nuisances including noise, dust, water ponding/splash, excessive vehicle speed, unsightliness, and odors/fumes.

Reclamation

- Site reclamation activities shall begin as soon as feasible following construction. Reclamation shall be in compliance with an approved landscape plan. If the site is a natural area, this includes spreading of stockpiled topsoil onto the disturbed lands; seeding with native species and installation of temporary erosion control measures where applicable (e.g., erosion blankets, water diversion structures).

- The landscape plan, seed mix and/or planting plugs used for reclamation shall be approved by Meewasin to ensure appropriateness for the site conditions. For seed mixes, seed certificates must be provided to ensure they are weed-free.

Variances and Emergency Response Protocols

Variances

In addition to any ongoing, prescribed monitoring, the following actions are to be reported to the Authority's designated representative:

- Type 1: minor variance from Environmental Evaluation Plan or Heritage Resources Plan with no immediate risk to human health, wildlife, air, land, water or cultural heritage resources. This could include, but is not limited to a misplaced silt fence, uncovered clean soil stockpile, missed check by an environmental monitor, or failure to submit an environmental monitoring report.
    - It is the proponent's responsibility to report to Meewasin within one week with a summary of the variance, the corrective actions to be undertaken, a timeframe for the corrective action implementation and steps to be undertaken to avoid the situation in the future.
- Type 2: variance from Environmental Evaluation Plan or Heritage Resources Plan or other action with actual or potential immediate risk to human health, wildlife, air, land, water or cultural heritage resources. This could include, but is not limited to, a discharge of non-contaminated water into a water body, damage or harm to protected trees, fueling or fuel storage close to a water body.
    - It is the proponent's responsibility to report to Meewasin the same day or, if not a business day, on the next business day with a summary of the variance, the corrective actions to be undertaken, a timeframe for the corrective action implementation and steps to be undertaken to avoid the situation in the future.
- Type 3: variance from Environmental Evaluation Plan or Heritage Resources Plan or other action with actual or potential significant risk to human health, wildlife, air, land, water or cultural heritage resources.
    - Stop work until situation rectified.
    - It is the proponent's responsibility to report to Meewasin the same day or, if not a business day, on the next business day with a summary of the variance, the corrective actions to be undertaken, a timeframe for the corrective action implementation and steps to be undertaken to avoid the situation in the future.

Spills and other contamination

- Spills, as defined under the *Saskatchewan Environmental Spill Control Regulations*, shall be immediately reported to the **Provincial Enforcement Centre Spill Report Line** phone

number and on the day of, or next business day to Meewasin's Resource Conservation Manager.

- In areas where there is reasonable belief that there may be contaminants on a site due to the presence of fill materials or historic land uses, the Authority may require a Phase I, II and/or III Environmental Site Assessment (ESA) as a condition of approval. Additional conditions of approval may result from the ESA report recommendations.
- If discolored or odorous soil is encountered during excavation, work shall cease immediately until a qualified environmental professional assesses the risk and recommends appropriate actions.
- When working on contaminated sites, the following steps shall be followed:
    - Notify all parties involved in the work.
    - Ensure all workers and site visitors follow personal decontamination measures before eating, smoking and/or leaving the site.
    - Ensure all workers and site visitors are wearing appropriate personal protective equipment.
    - Ensure all engineering controls are reviewed to limit human exposure, including hydrovac, enclosed equipment, tarping soil, water misting, fences/barricades, over-excavating and covering with clean soil.
    - Ensure all engineering controls are reviewed to limit soil, ground water and surface contamination, including silt fencing and/or straw wattle, tarping slopes, fences/barricades, over-excavating and covering with clean soil.