

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 3, Issue 4, June 2023

Envirokerb – A Linear and Combined Drainage System

Mohammed Patel, Chetan Patekar, Yash Kokate, Pratik Gavali, Prof. P. S. Chavanke (Guide) Guru Gobind Singh Polytechnic, Nashik, India

Abstract: Poor subsurface drainage is one of the factors that causes pavement distress and reduces pavement service life. The evaluation of roadway subsurface drainage system required good knowledge in groundwater flow especially the unsaturated water flow through pavement layers and related properties that affect the ability of drainage system to remove moisture held in base, sub base and sub grade layers, so that the kerbs are provided in the road pavement. Kerb is a line of stone or concrete forming an edge between a pavement and a roadway, so that the pavement is some 15 cm above the level of the road. For most purposes, the top of the kerb should be 100 mm above the road surface. If kerbs are placed too high it can induce 'kerb shyness' which is where the width of carriageway. Over the past few years, the use of Combined Kerb Drainage has grown rapidly, with engineers appreciating the advantages offered over the traditional gully and pipe drainage systems, for car parks and carriageways. Envirokerb is a revolutionary combined kerb drainage system. Envirokerb is made from recycled plastic composite material. The system has excellent surface drainage efficiency which coupled with its large flow capacity, makes it superior to and much less expensive than conventional kerb and point drainage on many highway and non-highway schemes. Envirokerb is made entirely from recycled materials. It is widely acknowledged that the construction industry has a major impact on the earth's already dwindling resource. Existing combined kerb drainage systems manufactured in traditional materials rely heavily on natural resources. There are additional logistical concerns on the transportation of these materials through the smaller countryside communities in the UK.

Keywords: Envirokerb, Real-time Control, Optimal Control, Combined Sewer Networks, Flood Prevention.

REFERENCES

- [1] A policy on geometric design of Highways and Streets (2001). American Association of State Highway and Transport Officials (AASHTO).
- [2] Country paper on Bangladesh road and road transport. Road and RailwayDivision (RRD). Ministry of Communications Government ofBangladesh.
- [3] Gupta, B. L (2003). Roads, Railway, Bridges, Tunnels and Harbour-Doc Engineering. Standard PublishersDistributers, Delhi, India.
- [4] Shaw, R.E.M. T. Turvey, and W. M. Mace.1982. "Ecological Psychology: The Consequence of a Commitment to Realism." In Cognition and theSymbolic Processes, I1 (pp.159193),edited by W. Weimer and D.Palermo. Hillsdale, NJ: Lawrence Erlbaum Associates.
- [5] Browne, J. 2002. Charles Darwin: The Power of Place. Princeton:Princeton Uni versity Press. Dretske, F. 1994. "Meaningful Perception." In Visual Cognition: An Invitation to Cognitive Science (pp. 331-352), edited by S. Kosslyn and D. Osherson. Cambridge: MIT Press.
- [6] Civil engineering dictionary (2004).
- [7] Highwaydrainage.http://www.thefreedictionary.com/drainage
- [8] National Cooperative Highway, Research Program (1998).Pavement Subsurface Drainage Systems. Road Management & Engineering Journal. http://www.usroads.com/journals/rmej/ 980 3/rm980304.htm.
- [9] Owuama C. O, Uja E, & Kingsley C. O. (2014). Sustainable Drainage System for Road Networking. International Journal of Innovation, Management and Technology, 5(2), 83-86.

Copyright to IJARSCT www.ijarsct.co.in DOI: 10.48175/IJARSCT-11586



509

IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 3, Issue 4, June 2023

- [10] Siddhartha, R., Agarwal, P. K and Rajnish, S. (2012). Drainage andflexible pavement performance. International Journal of Engineering Science and Technology. Vol. 4 No.04 pp. 1308 – 1311. Department of Civil Engineering, Guru Gobind Singh Polytechnic, Nashik 49.
- [11] Tiza, Michael. Control of Flooding at Banks of Rivers Case Study of River Benue Bordering University of Agriculture Makurdi Water Works, International Journal of Engineering Science and Computing, April 2016. P 4047-4089.

